

## REMARKS

In the Office Action issued on December 26, 2007, the Examiner

- objected to claims 6, 20, 33, 39 and 54 for informalities relating to the units indicator "lm";
- objected to claims 6, 7, 8, 13, 16, 19, 20, 21, 23, 25, 26, 30, 31 33, 39, 54, and 55 for informalities relating to the inclusion of the term "preferably";
- objected to claim 33 for an informality relating to the units indicator "?m";
- objected to claim 35 for an informality relating to the inclusion of the text "dimensional/ has";
- objected to claim 51 for an informality relating to the misspelling of the term "focused";
- objected to claim 55 for an informality relating to the lack of an ending period;
- objected to claims 4 through 25, 30 through 50, 54 through 56, and 61 as being in improper form as multiple dependent claims that depend on another multiple dependent claim;
- rejected claims 1 through 3, 26 through 29, 51 through 53, 57 through 60, and 62 under 35 U.S.C. §102(b) as being anticipated by Will *et al.* (DE 101 55 492) (hereinafter referred to as "Will");
- rejected claim 60 under 35 U.S.C. §102(b) as being anticipated by Kato *et al.* (JP 06-224510) (hereinafter referred to as "Kato");
- rejected claim 62 under 35 U.S.C. §102(b) as being anticipated by Kahen *et al.* (United States Patent No. 5,276,699) (hereinafter referred to as "Kahen"); and
- rejected claim 62 under 35 U.S.C. §102(b) as being anticipated by

Keaton *et al.* (United States Patent No. 6,563,995) (hereinafter referred to as "Keaton");

The Applicants have fully considered the Office Action and cited references and submit this Reply and Amendment in response to the Examiner's objections and rejections. Reconsideration of the application for patent is requested.

Preliminary matter – submission of separate listing of references cited in International Search Report

The Examiner noted that the references cited in the International Search Report (PCT/GB2004/004334) have been considered but indicated that the references would not be listed on any patent resulting from the current application because the references had not been printed on a separate listing. The Applicants have herein provided a completed form PTO/SB/08A for this purpose and request that the Examiner place the form in the file, indicate the consideration of the references by placing initials in the appropriate column, and removing the restriction on listing these references on any resulting patent.

Please note that, based on the Examiner's instruction in the subject Office action, the undersigned attorney believes that no certification is required on the form and that no separate fee is applicable. If this belief is incorrect, the attorney requests specific instructions from the Examiner.

Objections to the Claims

The Applicants have herein amended claims 6, 20, 33, 39, and 54 to remove the "lm" units indicator and to include the proper " $\mu$ m" units indicator. This amendment is made simply to correct a typographical error in the claims as filed and is not considered to narrow the scope of the claims. The Applicants respectfully submit that these amendments to the claims fully overcome the objections relating to the "lm" units indicator and respectfully request withdrawal of these objections.

The Applicants have herein amended claims 6, 7, 8, 13, 16, 19, 20, 21, 23, 25, 26, 30, 31, 33, 39, 54, and 55 to remove the term “preferably” and other related language. The Applicants make these amendments to the claims in order to more particularly point out and distinctly claim that which they regard as the invention according to these claims. The Applicants respectfully submit that these amendments to the claims fully overcome the objections relating to the inclusion of “preferably” in the claims and respectfully request withdrawal of these objections.

The Applicants have herein amended claim 33 to remove the “m” units indicator and to include the proper “ $\mu$ m” units indicator. This amendment is made simply to correct a typographical error in the claim as filed and is not considered to narrow the scope of the claim. The Applicants respectfully submit that this amendment to claim 33 fully overcomes the objection to this claim and respectfully request its withdrawal.

The Applicants have herein amended claim 35 to remove the “dimensional/has” language and replace it with the proper “dimensional and has” language. This amendment is made simply to correct a typographical error in the claim as filed and is not considered to narrow the scope of the claim. The Applicants respectfully submit that this amendment to claim 35 fully overcomes the objection to this claim and respectfully request its withdrawal.

The Applicants have herein amended claim 51 to correct the spelling of the term “focused” (two occurrences). This amendment is made simply to correct a typographical error in the claim as filed and is not considered to narrow the scope of the claim. The Applicants respectfully submit that this amendment to claim 51 fully overcomes the objection to this claim and respectfully request its withdrawal.

The Applicants have herein amended claim 55 to add an ending period. This amendment is made simply to correct an omission in the claim as filed and is not considered to narrow the scope of the claim. The Applicants respectfully submit that this amendment to claim 55 fully overcomes the objection to this claim and respectfully request its withdrawal.

The Applicants have herein amended claims 4 through 6, 8, 10, 14, 16 through 18, 20 through 25, 30 through 32, 34 through 36, 39 through 46, 50, 54 through 56, and 61 to remove the dependency on another multiple dependent claim. Other claims to which the Examiner raised this objected are changed by way of their dependency on these amended claims. The Applicants respectfully submit that these amendments fully overcome the objections to the claims for improper form and respectfully request their withdrawal.

Rejections under 35 U.S.C. 102§(b) based on Will

The Examiner rejected claims 1 through 3, 26 through 29, 51 through 53, 57 through 60, and 62 under 35 U.S.C. §102(b) as being anticipated by Will.

The Applicants have herein cancelled claims 2, 27, 57, and 62. The rejections of these claims is, therefore, moot.

The Applicants have herein amended independent claims 1, 26, and 51 to include a limitation relating to a lower refractive index. Additionally, the Applicants have herein amended claims 58 and 60 to place these claims in independent form and include a limitation relating to a lower refractive index.

Will fails to disclose an alteration of the refractive index that is a *lowering* of the refractive index of the region of the crystal being treated. While it is true that if Will is interpreted to disclose altering the refractive index, there must be either an increase or a decrease, Will fails to explicitly disclose a decrease in the refractive index as is explicitly required by the claims as amended herein.

Apparently recognizing this lack of an explicit teaching, the Examiner asserts that "[a]s such the average refractive index of the region being either decreased or increased is inherent in that teaching."

The Manual of Patent Examining Procedure states that "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." See M.P.E.P. § 2112 citing to *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ.2d 1955, 1957 (Fed.

Cir. 1993). Moreover, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

*In re Robertson*, 169 F.3d 743, 745 49 USPQ.2d 1949, 1950-1951 (Fed. Cir. 1999) (citations omitted).

The Examiner has failed to provide the required basis in fact or technical reasoning to support a determination that a decreased or lowered refractive index necessarily flows from the teachings of Will. Indeed, such a decrease in the refractive index would be counter to the usual expectations since the known use of lasers in glass increases the refractive index. As such, an anticipation rejection relying on a theory of inherency based on the disclosure of Will must fail.

The Applicants have herein amended the rejected claims in a manner that overcomes the rejection based on Will. Furthermore, the Examiner has failed to provide the necessary support for a rejection based on inherency in relation to the amendments made herein. For at least these reasons, the rejections of the claims are improper and should be removed.

#### Rejections under 35 U.S.C. 102§(b) based on Kato

The Examiner rejected claim 60 under 35 U.S.C. §102(b) as being anticipated by Kato.

The Applicants have herein amended claim 60 to place the claim in independent form and to include a limitation requiring that the unmodified core be surrounded by material modified to have a lower refractive index. Kato does not disclose this limitation and cannot, therefore, properly serve as an anticipatory reference for the claim as amended herein.

Withdrawal of this rejection of the claim is requested.

Rejection under 35 U.S.C. 102§(b) based on Kahen

The Examiner rejected claim 62 under 35 U.S.C. §102(b) as being anticipated by Kahen.

The Applicants have herein cancelled claim 62. The rejection of this claim is, therefore, moot.

Rejection under 35 U.S.C. 102§(b) based on Keaton

The Examiner rejected claim 62 under 35 U.S.C. §102(b) as being anticipated by Keaton.

The Applicants have herein cancelled claim 62. The rejection of this claim is, therefore, moot.

## **CONCLUSION**

The Applicants have fully responded to the objections and rejections listed by the Examiner in the December 26, 2007, non-final Office Action. A Notice of Allowability relating to all claims currently under consideration is appropriate and respectfully requested by the Applicants.

Should the Examiner have any questions regarding this Reply and Amendment, or the remarks contained herein, the undersigned attorney would welcome the opportunity to discuss such matters with the Examiner.

Respectfully submitted,

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